



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/753,226	12/28/2000	Jonathan M. Zwieg	3239P064	9354
8791	7590	03/24/2004	EXAMINER	
BLAKELY SOKOLOFF TAYLOR & ZAFMAN 12400 WILSHIRE BOULEVARD, SEVENTH FLOOR LOS ANGELES, CA 90025			KADING, JOSHUA A	
			ART UNIT	PAPER NUMBER
			2661	7

DATE MAILED: 03/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/753,226

Applicant(s)

ZWEIG ET AL.

Examiner

Joshua Kading

Art Unit

2661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-13 and 15-20 is/are rejected.
- 7) ☒ Claim(s) 5 and 14 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5_6.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Objections

Claims 5 and 12 are objected to because of the following informalities:

Claim 5 has several limitations that lack antecedent basis. Claim 5 also recites the limitation "placing the first MAC address of the second address field..." This doesn't make sense. Therefore, based on claims similar to claim 5, claim 5 should be changed to read as follows --placing a second MAC address of a second address field of the cast frame into a first address field of the data frame--.

Claim 12, line 3 states, "scanning to a channel". This should be changed to --scanning a channel--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 6, 8, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Hershey (U.S. Patent 5,481,535).

Regarding claim 1, Hershey discloses "a method comprising:

transmitting a cast frame for a destination device (figure 3A, element 33); and

Art Unit: 2661

receiving a data frame from the destination device in response to the destination device receiving the cast frame for acknowledgement of receipt of the cast frame (figure 3A, element 41 where the next step in the method clearly indicates the receipt of ACKs)."

Regarding claim 6, Hershey discloses "the destination device is a wireless unit (figure 1A, any element mt is a wireless unit employing the method of figure 3A)."

Regarding claim 8, Hershey discloses "a method comprising:

determining that a cast frame is scheduled for transmission (figure 3A, element 29 where acquiring data and the ID of the destination signifies the packet ready for transmission);

translating the cast frame into a plurality of unicast frames (figure 3A, element 33 where broadcasting the packet means sending the same packet, or copy of the original packet, to all units as a unicast packet; col. 6, lines 6-14 shows the unicast result by listening for ACKs from the transceivers who received the packet);

transmitting each of the plurality of unicast frames to a corresponding plurality of destination devices (figure 3A, element 33); and

receiving an acknowledge frame from each of the plurality of destination devices in response to receiving one of the plurality of unicast frames (figure 3A, element 41; col. 6, lines 6-14)."

Art Unit: 2661

Regarding claim 17, Hershey discloses "a wireless network system comprising:
a plurality of wireless units (figure 1A, elements mt);
a fixed backbone network (figure 1A, where elements bt connect to a backbone network that carries the communications of the mt's); and
an access point in communication with both the fixed backbone network and the plurality of wireless units, the access point to transmit a cast frame for one of the plurality of wireless units and to receive a data frame from the one of the plurality of wireless units in response to the one of the plurality of wireless units receiving the cast frame for acknowledgement of receipt of the cast frame (figure 1A, elements bt are the access points, where it is known in the art that the bt's send and receive all data from the mt's in its coverage area and from the backbone network to which it is connected)."

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hershey.

Regarding claim 20, Hershey discloses "transmitting a cast frame for a destination device (figure 3A, element 33); and

Art Unit: 2661

receiving a data frame from the destination device in response to the destination device receiving the cast frame for acknowledgement of receipt of the cast frame (figure 3A, element 41 where the next step in the method clearly indicates the receipt of ACKs)."

Hershey lacks "a software module placed in a stored medium and executable by an electronic device, the software module comprising: a first module... and a second module" where the first and second modules perform the steps of transmitting and receiving described by Hershey.

However, it would have been obvious to one with ordinary skill in the art at the time of invention to include the software modules with the steps of transmitting and receiving because in a wireless communication system, the only way to communicate with electronic signals is to process them with a computer which runs software programs. The motivation for the use of software being that this is the most feasible and quickest way to accomplish a wireless transmission.

Claims 2-4, 7, 9, 11-13, 15, 16, and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hershey over IEEE 802.11 (Chapter 7, provided by applicant).

Regarding claims 2, 9, and 18; and claims 3, 10, and 19, Hershey discloses the methods of claims 1 and 8 and the system of claim 17. Hershey lacks "the cast frame is a multicast frame assembled in accordance with Institute of Electrical and Electronics

Art Unit: 2661

Engineers (IEEE) 802.11" for claims 2, 9, and 18. Hershey also lacks "the cast frame is a broadcast frame assembled in accordance with Institute of Electrical and Electronics Engineers (IEEE) 802.11" for claims 3, 10, and 19. However, IEEE 802.11 discloses both "the cast frame is a multicast frame assembled in accordance with Institute of Electrical and Electronics Engineers (IEEE) 802.11" and "the cast frame is a broadcast frame assembled in accordance with Institute of Electrical and Electronics Engineers (IEEE) 802.11" (page 39, section 7.1.3.3.2, part B where it states that the cast frame can be designated as a multicast or broadcast). It would have been obvious to one with ordinary skill in the art to include the 802.11 standards for the cast frame with the methods of claims 1 and 8 and the system of claim 17 for the purpose sending the same packet to a plurality of destinations at once. The motivation being that sending the packet to a plurality of destinations all at once versus one destination at a time saves resources and time.

Regarding claim 4, Hershey discloses the method of claim 1. Hershey lacks "the cast frame comprises a first address field including a first medium access control (MAC) address assigned to a group of wireless units and a second address field including a second MAC address associated with a device transmitting the cast frame." However, IEEE 802.11 discloses "the cast frame comprises a first address field including a first medium access control (MAC) address assigned to a group of wireless units and a second address field including a second MAC address associated with a device transmitting the cast frame (page 34, section 7.1.1, figure 12 shows a MAC frame

Art Unit: 2661

format with several address fields where two of the address fields take on the values of destination address for the cast frame and that of source address for that of the transmitting device, this can be seen in figure 23 on page 45)." It would have been obvious to one with ordinary skill in the art at the time of invention to include the MAC addresses with the method of claim 1 for the purpose of allowing the packet to carry its destination address with it always while en route to the destination. The motivation being that with its destination address, it can be routed to its destination from anywhere.

Regarding claim 7, Hershey discloses the method of claim 1. Hershey lacks "the cast frame comprises a first address field including a plurality of bits set to a predetermined value and a second address field including a MAC address associated with a device transmitting the cast frame." However, IEEE 802.11 discloses "the cast frame comprises a first address field including a plurality of bits set to a predetermined value and a second address field including a MAC address associated with a device transmitting the cast frame (page 34, section 7.1.1, figure 12 shows a MAC frame format with several address fields where two of the address fields take on the values of destination address for the cast frame and that of source address for that of the transmitting device, this can be seen in figure 23 on page 45)." It would have been obvious to one with ordinary skill in the art at the time of invention to include the MAC addresses with the method of claim 1 for the purpose of allowing the packet to carry its destination address with it always while en route to the destination. The motivation being that with its destination address, it can be routed to its destination from anywhere.

Art Unit: 2661

Regarding claim 11, Hershey discloses "a method comprising:
transmitting...a cast frame to a destination device (figure 3A, element 33); and
receiving a data frame from the destination device in response to the destination
device receiving...the frame for acknowledgement of receipt of the cast frame (figure
3A, element 41 where the next step in the method clearly indicates the receipt of
ACKs)."

Hershey lacks the cast frame is "...an Eavesdrop Unicast..." frame. However,
IEEE 802.11 discloses the cast frame can be "...an Eavesdrop Unicast..." frame (page
39, section 7.1.3.3.2 part A describes an individual address scheme or unicast; page
44, figure 22 shows the structure of a data frame which is the same as applicant's
Eavesdrop Unicast packet shown in figure 8 of the specification). It would have been
obvious to one with ordinary skill in the art at the time of invention to include the
Eavesdrop Unicast frame with the transmitting and receiving of Hershey for the purpose
of sending to only one destination the frame of figure 22 on page 44 of the IEE 802.11
standard. The motivation being that the other destinations don't need to waste time and
resources processing a frame not intended for them.

Regarding claim 12, Hershey and IEEE 802.11 disclose the method of claim 11.
IEEE 802.11 lacks "scanning a channel carrying the Eavesdrop Unicast frame by a
plurality of devices including the destination device; receiving of the Eavesdrop Unicast
frame by the destination device". However, Hershey further discloses "scanning a

Art Unit: 2661

channel carrying the Eavesdrop Unicast frame by a plurality of devices including the destination device (figure 3B, element 35 where the transceiver is listening or scanning for the signal before it receives it, as for the plurality of devices scanning, it is well known in the art that mobile communication devices scan a communication channel in order to know its state, such as busy or idle, the mobile communication devices may also scan the channel to know when it is their turn to communicate as is mentioned in col. 2, lines 63-65); receiving of the Eavesdrop Unicast frame by the destination device (figure 3B, element 35)". It would have been obvious to one with ordinary skill in the art at the time of invention to include the scanning and receiving with the method of claim 11 for the same reasons and motivation as in claim 11.

Regarding claim 13, Hershey and IEEE 802.11 disclose the method of claim 12. Hershey lacks "the Eavesdrop Unicast frame includes at least four address fields, a first address field including a destination address of the destination device and a fourth address field including a medium access control (MAC) address assigned to a plurality of devices including the destination device." However, IEEE 802.11 further discloses "the Eavesdrop Unicast frame includes at least four address fields, a first address field including a destination address of the destination device and a fourth address field including a medium access control (MAC) address assigned to a plurality of devices including the destination device (page 44, figure 22 shows the structure of a data frame which is the same as applicant's Eavesdrop Unicast packet shown in figure 8 of the specification)." It would have been obvious to include the structure of the Eavesdrop

Art Unit: 2661

Unicast packet with the method of claim 12 for the same reasons and motivation as in claim 12.

Regarding claim 16, Hershey and IEEE 802.11 disclose the method of claim 12. Hershey lacks "the Eavesdrop Unicast frame includes at least four address fields, a first address field including a destination address of the 3 destination device and a fourth address field including a plurality of bits set to a predetermined value." However, IEEE 802.11 further discloses "the Eavesdrop Unicast frame includes at least four address fields, a first address field including a destination address of the 3 destination device and a fourth address field including a plurality of bits set to a predetermined value (page 44, figure 22 shows the structure of a data frame which is the same as applicant's Eavesdrop Unicast packet shown in figure 8 of the specification)." It would have been obvious to include the structure of the Eavesdrop Unicast packet with the method of claim 12 for the same reasons and motivation as in claim 12.

Regarding claim 15, Hershey and IEEE 802.11 disclose the method of claim 11. IEEE 802.11 lacks "the destination device is a wireless unit." However, Hershey further discloses "the destination device is a wireless unit (figure 1A, any element mt is a wireless unit employing the method of figure 3A)." It would have been obvious to one with ordinary skill in the art at the time of invention to include the wireless unit with the method of claim 11 for the same reasons and motivation as in claim 11.

Allowable Subject Matter

Claims 5 and 14 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Diepstraten et al. (U.S. Patent 5,991,287) show the use of the IEEE 802.11 standard in a wireless system. Haggerty et al. (U.S. Patent 6,331,983 B1) shows the multicasting with MAC addresses in a switching system. Chuah (U.S. Patent 6,115,390) shows ACKs with multicasting/broadcasting with IEEE 802.11 formatted frames. Bare (U.S. Patent 6,456,597 B1) shows frames formatted using the IEEE 802.11 standard and destination/source MAC addresses.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua Kading whose telephone number is (703) 305-0342. The examiner can normally be reached on M-F: 8:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas Olms can be reached on (703) 305-4703. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


Art Unit: 2661

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



JK
March 18, 2004

Joshua Kading
Examiner
Art Unit 2661


KENNETH VANDERPUYE
PRIMARY EXAMINER